

QUARTERLY REPORT
CONCERNING
MTBE USE IN
CALIFORNIA GASOLINE
April 1 through June 30, 2000
Report to the Legislature

STAFF REPORT

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Gray Davis, Governor

Quarterly Report Concerning MTBE Use in California Gasoline

April 1 through June 30, 2000

Background

SB 1001 (Burton; Chapter 814, Statutes of 1999) requires the Energy Commission to prepare a quarterly report on the use of methyl tertiary butyl ether (MTBE) in California gasoline. This report summarizes the amount of MTBE each California refinery used during the preceding quarter April through June 2000. The amount of MTBE reported in this document is the quantity blended at each refinery location for use in the production of California Reformulated Gasoline (CaRFG) and intended for sale in the State. The numbers do not include any MTBE used at California refinery for the production of any type of gasoline intended for sale outside the State. In addition, a number of small refineries operating in the State are not included in this report because they do not produce gasoline.

MTBE is a compound that contains oxygen and is referred to as an oxygenate. Ethanol and tertiary amyl methyl ether are two other oxygenates currently being used in California's gasoline, but in significantly smaller volumes than those of MTBE. Federal law requires California refiners to use a minimum amount of oxygen in all reformulated gasoline sold in severe and extreme ozone-nonattainment regions of the State. California has requested a waiver from this requirement. A response is still pending.

The California Air Resources Board adopted reformulated-gasoline regulations that enable refiners to produce fully complying gasoline without the use of any oxygenates. Thus, if the request to waive the Federal minimum-oxygen requirement is granted, California refiners would be able to reduce the volume of MTBE blended into gasoline. However, until they complete refinery modifications, refiners will likely need some MTBE to help them meet desired octane levels in premium grades of gasoline and, in reduced quantities in other grades, to help achieve compliance with reformulated-gasoline specifications.

Second Quarter 2000 Results

California refiners used 8,837,000 barrels of MTBE to make CaRFG during the second quarter of 2000. This sum represents approximately 97 thousand barrels per day of MTBE or nearly 4.1 million gallons per day. The table on page 2 shows the use of MTBE by each refinery in California and total CaRFG production. Compared to the previous quarter, the total volume of MTBE used in California's gasoline increased by 1.5 percent. CaRFG production totaled 82 million barrels in the first quarter and 90 million barrels in the second quarter, for a corresponding 9.5 percent increase. Demand for gasoline was lower in the first quarter, compared to the second, which is a time of year when refiners typically perform routine maintenance at their facilities leading to decreased gasoline

production. MTBE volumes increased in the second quarter, but the overall percentage in the CaRFG pool decreased due to the greater increase in CaRFG production.

MTBE volumes can decline for individual refineries from one quarter to the next because gasoline production from a facility could decrease due to process equipment problems. In addition, refiners who produce gasoline for sale in areas of the State that fall outside the Federal Ozone Nonattainment regions can market gasoline with lower concentrations of MTBE compared to gasoline sold in other areas of California. Therefore, it is possible that gasoline produced at certain refineries for sale in these areas can contain a lower concentration of MTBE when compared to the previous quarter.

Note that the actual volume of pure MTBE is less than the totals as illustrated below. The purity of MTBE varies depending on the source. Approximately 88 percent of the MTBE used by California refiners is imported and its quality is normally 95 percent pure MTBE with 5 percent impurities in the form of other hydrocarbons. The other source of MTBE originates from production facilities located within some California refineries. The purity of this MTBE is normally lower than that of the imported MTBE, increasing physical volumes of this portion of the supply.

California MTBE Use By Refinery Location

Refiner	California Location	MTBE Use This Quarter 2 nd Qtr — 2000 (Thous. of Barrels)	MTBE Use Previous Quarter 1 st Qtr — 2000 (Thous. of Barrels)	Change From Previous Quarter (Percent)
BP Amoco ¹	Carson	1,659	1,902	- 12.8
Chevron	El Segundo	1,098	1,066	+ 3.0
Chevron	Richmond	193	262	- 26.3
Equilon ²	Bakersfield	231	220	+ 5.0
Equilon ³	Los Angeles	541	564	- 4.1
Equilon ⁴	Martinez	731	648	+ 12.8
Exxon-Mobil	Torrance	669	668	+ 0.1
Kern Oil	Bakersfield	80	89	- 10.1
Tosco	Avon	405	315	+ 28.6
Tosco	Los Angeles	769	778	- 1.2
Tosco	Rodeo	473	235	+ 101.3
UDS ⁵	Wilmington	857	845	+ 1.4
Valero ⁶	Benicia	1,131	1,112	+ 1.7
State Refinery MTBE Totals		8,837	8,704	+ 1.5
State CaRFG Production		89,910	82,085	+9.5

¹ Formerly known as the ARCO — Carson refinery prior to the merger between BP Amoco and ARCO.

² Formerly known as the Texaco — Bakersfield refinery prior to the merger between Texaco and Shell.

³ Formerly known as the Texaco — Los Angeles refinery prior to the merger between Texaco and Shell.

⁴ Formerly known as the Shell — Martinez refinery prior to the merger between Texaco and Shell.

⁵ Ultramar Diamond Shamrock

⁶ Formerly known as the Exxon/Mobil — Benicia refinery prior to the purchase by Valero.